

HAHN AND ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

March 16, 2015

Mr. Dana Bayuk
Oregon Department of Environmental Quality
Northwest Region, Portland Office
Portland Harbor Section
2020 SW Fourth Avenue, Suite 400
Portland Oregon 97201-4987

HAI Project No. 2708
DEQ ECSI File No. 84

**SUBJECT: Progress Report, NW Natural Site, 7900 NW St. Helens Avenue and
7200 NW Front Avenue, Portland, Oregon**

Dear Mr. Bayuk:

Hahn and Associates, Inc. (HAI) has prepared this monthly Progress Report summarizing Remedial Investigation/Feasibility Study (RI/FS) and source control-related work activities conducted by NW Natural relating to historic manufactured gas plant (MGP) activities at the NW Natural Site during the month of February 2015. NW Natural is completing upland investigatory activities at the NW Natural Site under the Voluntary Agreement No. ECVC-WMCVC-NWR-94-13 (Voluntary Agreement) between NW Natural and the Oregon Department of Environmental Quality (DEQ).

1.0 Communications and Document Submittals

In correspondence to DEQ dated February 2, 2015 (John Renda to Dana Bayuk) Anchor QEA, on behalf of NW Natural, provided hard copies and CDs of the *Groundwater Source Control Phase 1 Testing Data Summary and Analysis Report*, previously submitted electronically on January 30, 2015.

In e-mail correspondence dated February 11, 2015 (Rob Ede to Dana Bayuk) and February 12, 2015 (Dana Bayuk to Rob Ede), notification and acknowledgement of the geophysical component of upcoming field work related to the search for evidence of the former industrial water supply well at Gasco were provided.

Program management implementation calls were conducted with DEQ on February 5, 2015 and February 19, 2015 to discuss NW Natural program management and project schedules.

In e-mail correspondence to DEQ dated February 16, 2015 (Ben Hung to Dana Bayuk) Anchor QEA, on behalf of NW Natural, provided a summary of agreements reached during a February 12, 2015 teleconference regarding source control treatment plant residuals testing and reporting. DEQ provided acknowledgement and clarifications to the agreement summary in e-mail correspondence dated February 24, 2015 (Dana Bayuk to Ben Hung).

In e-mail correspondence to DEQ dated February 16, 2015 (Halal Voges to Dana Bayuk) Anchor QEA, on behalf of NW Natural, provided soil and groundwater iso-concentration contour maps for the Gasco site.

A technical meeting with representatives of DEQ, NW Natural, and Siltronic was conducted via teleconference on February 23, 2015 to discuss details and status of various deliverables currently under preparation. At the request of DEQ the process

schedule for the Fill WBZ source control was not discussed. DEQ instead indicated that path forward for the Fill WBZ would flow out of the *Fill WBZ Design Evaluation Report*.

In e-mail correspondence dated February 23, 2015 (Rob Ede to Dana Bayuk) and February 25, 2015 (Dana Bayuk to Rob Ede), notification and acknowledgement (with clarification) of upcoming field work related to the first quarter 2015 integrated groundwater monitoring event were provided.

In e-mail correspondence to DEQ dated February 27, 2015 (Halal Voges to Dana Bayuk) Anchor QEA, on behalf of NW Natural, provided iso-concentration contour maps for total petroleum hydrocarbons in groundwater at the Gasco site.

2.0 Field Work

HAI field activities related to monitoring and maintenance of the dense non-aqueous phase liquid (DNAPL) extraction system at surficial fill well locations MW-6-32 and MW-13-30 occurred during February 2015. The system recovered approximately 49 gallons of fluids in February, primarily DNAPL.

Tasks related to optimization and maintenance of the hydraulic control and containment (HC&C) system and the wastewater treatment system were conducted in February 2015.

Fiber Optic Distributed Temperature Sensing (DTS) testing was conducted along a portion of the shoreline during February. Ongoing testing/operation of the HC&C system has been restricted in order to accommodate the DTS test.

NW Natural completed geophysical investigation activities in February in an effort to determine if the location of the former MGP-era bedrock water supply well could be determined.

Baseline DNAPL removal as needed to maintain at levels below the top of the well sumps was conducted by Anchor QEA during February 2015 in the following wells near the river shoreline.

- MW-16-45
- MW-26U
- MW-27U
- MW-38U
- MW-PW-2L

On March 31, 2014 NW Natural discontinued discharges of treated groundwater to the sanitary sewer (Industrial Wastewater Discharge Permit 500.022). All water is now directed to NW Natural's on-site wastewater treatment plant and discharged to the Willamette River consistent with National Pollutant Discharge Elimination System (NPDES) Permit No. 103061 (expires August 31, 2018). Results from NW Natural's NPDES effluent sampling are provided to DEQ in Discharge Monitoring Reports that are submitted on a monthly basis in accordance with the permit. As of February 28, 2015 a total of 86,913,990 gallons of treated water were discharged under the NPDES permit.

3.0 Anticipated Activities March and April 2015

NW Natural and DEQ technical working group communications and meetings are anticipated to occur as needed during March and April 2015 to discuss ongoing project tasks.

Fiber Optic Distributed Temperature Sensing (DTS) testing, initiated along a portion of the shoreline during February, is anticipated to continue during March 2015.

The *HC&C Model Calibration and Validation Report* is in preparation for submittal to DEQ at the end of March 2015.

Groundwater sampling activities as described in the Integrated Groundwater Monitoring Program (combined HC&C system Performance Monitoring and the Routine Monitoring Programs) will occur during March 2015 (initiated March 2, 2015).

Initiation of supplemental Doane Creek investigation activities remains contingent upon receipt of DEQ confirmation that the analyte list and screening levels are suitable for the Siltronic MGP Human Health and Ecological Risk Assessment. Legal access agreements with the off-site property owner (Burlington Northern Railroad) will also be necessary prior to initiation of field activities.

Disposition of the oil-water mixture originating from the TCE CMMA at the Siltronic property will be scheduled following feedback from DEQ regarding NW Natural's waste determination and intended management as described in e-mail correspondence dated March 2, 2015, with follow-up clarification provided March 10, 2015 (Rob Ede to Dana Bayuk).

NW Natural anticipates completion of test pitting activities at selected locations during the March or April timeframe in order to determine if the location of the former MGP-era bedrock water supply well can be determined. The test pitting work will be initiated after discussion with DEQ regarding the geophysical investigation results.

The *Fill WBZ Design Evaluation Report* is in preparation for submittal to DEQ during April 2015.

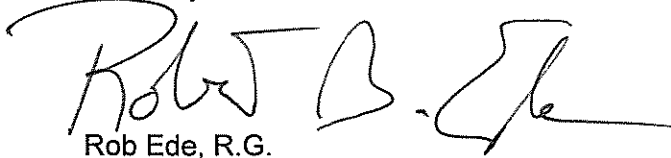
The following reports and work plans for the Site have been submitted to DEQ through the date of this progress report. Unless otherwise noted, NW Natural has not received DEQ comments on these documents.

- NW Natural's June 5, 2014 (Rob Ede to Dana Bayuk) request for concurrence of a final proposed analyte list and screening levels for use in the Doane Creek-related FSP being conducted as part of the Siltronic property RI. NW Natural and DEQ are currently in communication regarding finalization of an analyte list acceptable to DEQ.
- *Human Health and Ecological Risk Assessment Report, NW Natural Gasco Site*, Prepared for Oregon DEQ by Anchor QEA, dated December 2014.
- *Gasco Source Control Phase 1 Testing Data Summary and Analysis Report*, prepared by Anchor QEA, dated January 2015.
- *Isoconcentration contour maps for chemicals in soil and groundwater at the Gasco Site*, transmitted to DEQ in correspondence dated February 16, 2015 and February 27, 2015 (Halal Voges to Dana Bayuk).

- NW Natural's March 2, 2015 and March 10, 2015 (Rob Ede to Dana Bayuk) request for concurrence of waste determination and intended disposition of DNAPL recovered from the TCE CMMA.

Should you have any questions, please contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rob Ede', followed by a stylized flourish.

Rob Ede, R.G.
Principal

robe@hahnenv.com

- c:
- Mr. Bob Wyatt, NW Natural (electronic only)
 - Ms. Patty Dost, Pearl Legal Group PC (electronic only)
 - Ms. Sarah Riddle, Pearl Legal Group PC (electronic only)
 - Mr. Carl Stivers, Anchor QEA, L.L.C. (electronic only)
 - Mr. John Edwards, Anchor QEA, L.L.C. (electronic only)
 - Mr. Ben Hung, Anchor QEA, L.L.C. (electronic only)
 - Mr. Ryan Barth, Anchor QEA, L.L.C. (electronic only)
 - Ms. Halah Voges, Anchor QEA, L.L.C., (electronic only)
 - Mr. Henning Larsen, DEQ NW Region (electronic only)
 - Mr. Tom Gainer, DEQ NW Region (electronic only)
 - Mr. Keith Johnson, DEQ NW Region (electronic only)
 - Mr. Myron Burr, Siltronic Corporation (electronic only)
 - Ms. Kristine Koch, Region 10 EPA (electronic only)
 - Mr. Sean Sheldrake, Region 10 EPA (electronic only)
 - Mr. Rene Fuentes, Region 10 EPA (electronic only)
 - Mr. Lance Peterson, CDM, Inc. (electronic only)